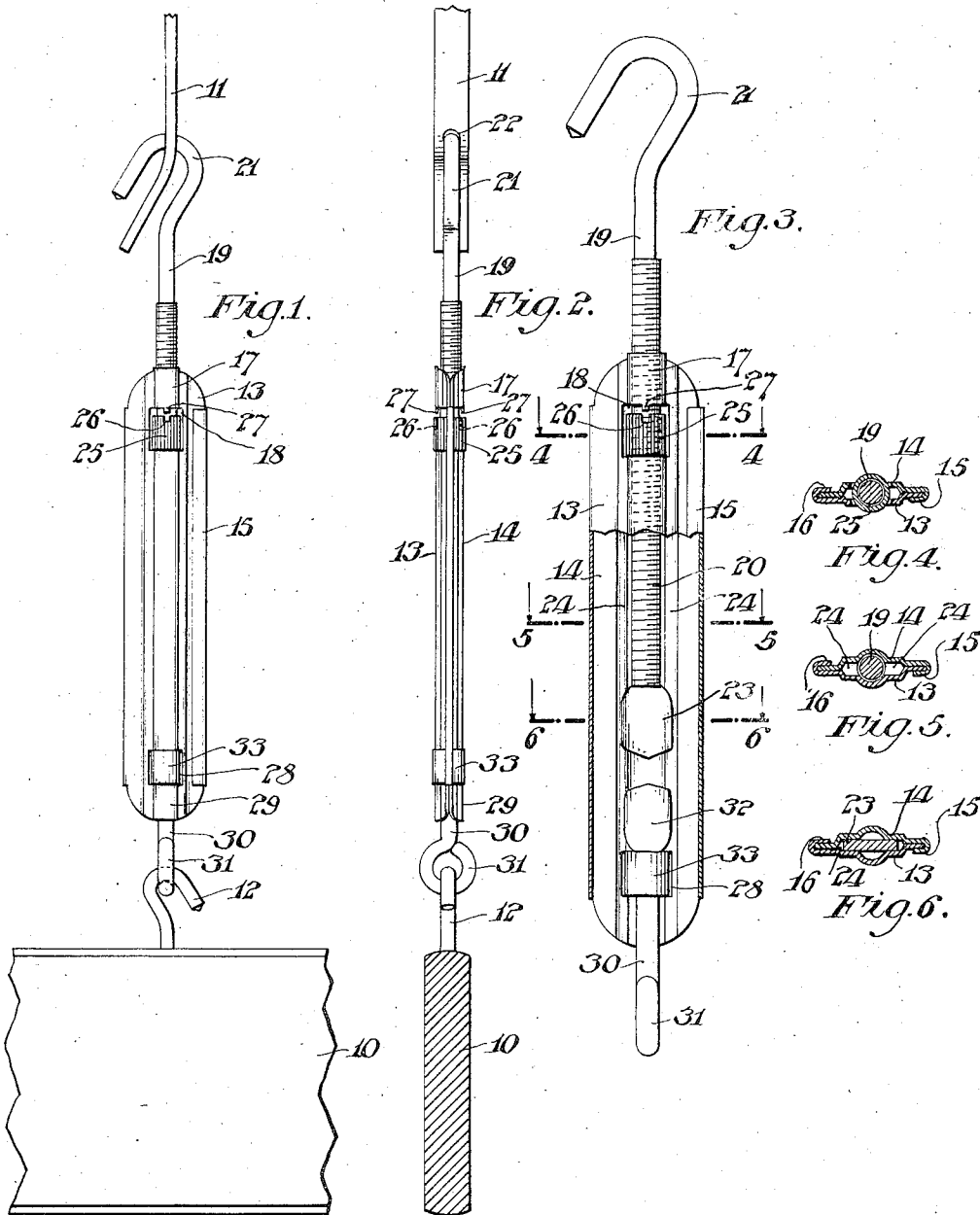


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ADJUSTABLE CONNECTER

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ADJUSTABLE CONNECTER

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My invention relates to connectors particularly suitable for loom harness, that is to say, to devices for adjustably connecting the actuating straps of the harness mechanism to the heddle frames.

The principal object of my invention is to provide a connector for loom harness as well as for other purposes which will be simple and inexpensive in construction, yet durable and efficient in operation.

A further object of my invention is to provide a connector which will permit a finer adjustment of the tension to be made than is possible with the devices at present in common use, and which, when adjusted to various positions, will be securely held or locked therein.

The nature and characteristic features of my invention will be more readily understood from the accompanying drawing forming part hereof, in which:

Figure 1 is a front elevational view of a preferred embodiment of my improved connector showing the application thereof to loom harness;

Fig. 2 is a side elevational view;

Fig. 3 is an elevational view on a somewhat larger scale than the connector shown in Figs. 1 and 2, parts being shown in section to illustrate the interior construction;

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a horizontal sectional view taken on the line 5—5 of Fig. 3; and

Fig. 6 is a horizontal sectional view taken on the line 6—6 of Fig. 3.

It will, of course, be understood that the description and drawing herein contained are illustrative merely, and that various modifications and changes may be made in the structure disclosed without departing from the spirit of my invention.

Upon particular reference to the drawing, it will be seen that I have provided a novel connector for interposition between the rail 10 of a heddle frame, and the actuating strap 11. The strap 11 is operated in the usual manner. The rail 10 may have a hook 12 thereon, this being common practice in the art. The connector is not limited, however, to use with loom harness, and may be interposed between other members where it is desired to utilize the novel features of my connector.

The improved connector includes a body portion preferably formed of two sheet metal plates 13 and 14, of similar conformation, which are held in face to face relationship by means of the bent over edge portions 15 and 16 thereof. These plates 13 and 14 may be stampings.

Adjacent one end of the body portion, the metal is shaped to provide a journal or guide portion 17. The metal adjoining this journal 17 is cut away, as at 18. A shank 19, which is threaded over a

substantial portion of its length, as indicated at 20, is slidably movable lengthwise with respect to said plates 13 and 14, and in said journal 17.

The outer end of the shank 19 is formed for attachment to a portion of the loom harness, 5 and may be shaped as a hook 21, for insertion in a hole 22 in the strap 11, or the shank 19 may be secured to the strap 11 in any other desired manner.

The inner portion of the shank 19 extends within the body 13, 14, and the end thereof is flattened to form an integral head member 23. The head member 23 is adapted to slide in longitudinal guideways 24 provided between the plates 13 and 14 by a suitable shaping of said plates. The shank 19 is prevented from substantial rotary movement with respect to the body portion 13, 14 by contact of this head 23 with the walls of the guideways 24.

An internally threaded sleeve or nut 25, mounted on the threaded portion 20 of the shank 19, and positioned within the cut away portion 18, permits a fine adjustment of the effective length of the connector. This sleeve 25 is knurled on its outer cylindrical surface, and has grooves 26 at one end thereof for engagement with the tongues 27 formed on the body 13, 14 adjacent the journal portion 17. It will be noted that the cut away portion 18 is of sufficient length to permit sufficient clearance between the sleeve 25 and the tongues 27. The shank 19 may thus be locked in a predetermined adjusted position when the strap 11 is pulled lengthwise by the normal strain thereof.

The other end of the body 13, 14 has a portion cut away, as at 28, and is shaped to provide a journal 29. A connector pin 30 extends through this journal 29, and the outer end thereof may be formed into an eye, as shown at 31, for connection to the hook 12.

The other or inner end of the connector pin 30 is flattened into a head portion 32 which fits in the guideways 24, and by its contact with the walls thereof prevents turning of the pin 30 with respect to the body 13, 14. A sleeve 33, mounted on the pin 30 and in the space 28, bears against the end of the journal 29 and prevents longitudinal displacement of the connector pin 30 when the parts are assembled.

The operation and functioning of the connector will now be understood. Upon initial assembly of the harness frame, the connector and the strap, 50 the effective length of the connector may be varied by turning the sleeve 25. This adjustment is made with the connector relieved of any appreciable tension. As soon as tension is placed upon the connector, the engagement of the 55 tongues 27 with the grooves 26 will maintain the connector in a positive locked condition. The positive lock thus provided is not subject to the uncertainties of a frictional clamping. In the event that the strap 11 becomes stretched or 60

otherwise elongated, the effective length of the connector may be readily adjusted to take up any undesirable slack.

It will, of course, be understood that a plurality of the connectors will be employed at the top and bottom of each harness frame in the loom.

While the connector has been shown and described with reference to the particular application thereof to loom harness, it will be understood that the same is susceptible of wider application and may be used wherever it is desired to provide a connector, adjustable in length, with means for positively locking the same in a desired condition of longitudinal adjustment.

I claim:

1. A connector for loom harness including a body, guideways formed therein, harness engaging means at one end of said body, said means including a head in engagement with said guideways, harness engaging means at the other end of said body, said means including a head slidable in said guideways, and means for adjusting and locking said second mentioned harness engaging means in a selected position.
2. A connector for loom harness including a body, guideways formed therein, harness engaging means at one end of said body, a head in engagement with said guideways and carried by said means, a stop member on said means in contact with said body, harness engaging means at the other end of said body, the said means being provided with a head slidable in said guideways, and means for adjusting and locking said second mentioned harness engaging means in a selected position.
3. A connector for loom harness including a body, guideways formed therein, harness engaging means at one end of said body, the said means including a head in engagement with said guideways and a collar in engagement with said body, harness engaging means at the other end of said body and having a head slidable in said guideways, and means for adjusting and locking said second mentioned harness engaging means in a selected position.
4. An adjustable connector including a body, guideways in said body, connecting means at one end of said body, said means including a member in engagement with said guideways, connecting means at the other end of said body, said means including a head slidable in said guideways, and means for adjusting and locking said second mentioned harness engaging means in a selected position.
5. An adjustable connector including a body portion, a shank extending from one end thereof, means for adjusting the position of said shank longitudinally with respect to said body portion, and means for preventing rotation of said shank with respect to said body portion, said means including a flattened head on said shank and a recessed portion in said body into which a portion of said head extends, said head being slidable longitudinally in said recessed portion.
6. An adjustable connector including a body portion, a shank extending from one end thereof, means for adjusting the position of said shank longitudinally with respect to said body portion, and means for preventing rotation of said shank with respect to said body portion, said means including longitudinal guide portions in said body portion and a flattened head on said shank slidable longitudinally in said guide portions.

7. An adjustable connector including a body portion; a shank extending from one end thereof; means for adjusting the position of said shank longitudinally with respect to said body portion; and means for preventing rotation of said shank with respect to said body portion, said means including longitudinal guide portions providing U-shaped recesses in said body portion and a flattened head on said shank having portions extending into said recesses and slidable longitudinally therein.

8. An adjustable connector including a body portion, a shank extending from one end thereof; means for adjusting the position of said shank longitudinally with respect to said body portion; and means for preventing rotation of said shank with respect to said body portion, said means including longitudinal guide portions providing U-shaped recesses in said body portion and a head on said shank having portions extending into said recesses and slidable longitudinally therein.

9. An adjustable connector including a body portion, said body portion having longitudinal U-shaped recesses therein serving as guides, a shank extending from one end of said body portion, said shank being provided with a threaded portion, a sleeve engaging said body portion and said threaded portion, means for maintaining said shank in adjusted position, and a flattened head on said shank and within the confines of said body portion, said head having portions extending into said recesses and slidable longitudinally within said recesses and said body portion, said head and said recesses preventing rotation of said shank with respect to said body portion.

10. An adjustable connector including a longitudinally extending body portion, a shank extending from one end thereof and extending within said body portion, said shank having a flattened portion, means for adjusting the longitudinal position of said shank with respect to said body portion, said body portion including two plate members having their longitudinal edges secured together, a recessed portion being provided between said plate members, said recessed portion having a portion conforming to the cross section of said shank and receiving the flattened portion of said shank.

11. An adjustable connector including a longitudinally extending body portion, a shank extending from one end thereof, means for adjusting the longitudinal position of said shank with respect to said body portion, and means on said shank for preventing rotation of said shank with respect to said body portion, said body portion including plate members secured together, and having an internally recessed portion to provide a mounting for said shank and a guide for the rotation preventing means.

12. An adjustable connector including a longitudinally extending body portion, a shank extending from one end thereof, means for adjusting the longitudinal position of said shank with respect to said body portion, and means on said shank for preventing rotation of said shank with respect to said body portion, said body portion including plate members having their longitudinal edges secured together, and having an internally recessed portion therebetween to provide a mounting for said shank and a guide for the rotation preventing means.

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